Refine Search

Search Results -

Terms	Documents
L21 not (gps$ or satellite$).clm.	13

Database: US Pre-Grant Publication Full-Text Database; US Patents Full-Text Database; US OCR Full-Text Database; EPO Abstracts Database; JPO Abstracts Database; Derwent World Patents Index; IBM Technical Disclosure Bulletins

Search: L22

Refine Search | Recall Text | Clear | Interrupt

Search History

DATE: Tuesday, May 23, 2006 Printable Copy Create Case

Set Name side by side	Query	Hit Count	Set Name result s t
	DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; THES=ASSIGNEE; PLUR=YES; OP=OR		
L22	L21 not (gps$ or satellite$).clm.	13	L22
L21	L20 and memor$	13	L21
L20	L19 and (magnetic$ adj field$) not (gps or satellite$)	38	L20
L19	l13 or l14 or l15 or l16	573	L19
L18	('5719500'| '6459955'| '6548982'| '6488105'| '5928309'| '6611755'| '6321515'| '5374914'| '6587573'| '6454036'| '2062719')[URPN]	92	L18
	DB=USPT; THES=ASSIGNEE; PLUR=YES; OP=OR		
L17	(L15 | L16)![PN]	0	L17
L16	(5999866 | 5392052 | 5777785 | 6144916 | 5471515 | 4912446 | 5617317 | 3800256 | 5636402 | 4688176 | 4891559 | 3875497 | 5036437 | 4357558 | 5657025 | 5220876 | 4470119 | 3756328 | 6292724 | 4414661 | 5430654 | 6119057 | 5534875 | 6008486 | 5811888 | 5194871 | 6076025 | 5812321 | 4736826 | 4114711 | 6338013 | 6006161 | 4977639 | 5815880)![PN]	34	L16

DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; THES=ASSIGNEE; PLUR=YES; OP=OR

L15	(4933864 | 5350033 | 6012002 | 6101951 | 5942853 | 5321614 | 5155684 | 5523951 | 4700427 | 5111401 | 5072154 | 4930742 | 5943009 | 4667203 | 4727290 | 4847769 | 6240368 | 5925080 | 5995884 | 5796094 | 5166688 | 5614788 | 5214757 | 5163273 | 5182502 | 5613261 | 5554914 | 5883861 | 5109566 | 4161793 | 5377551 | 6329925 | 5007234 | 5988306 | 5382957 | 4772832 | 4402158 | 5613196 | 4572530 | 5715093 | 5440216 | 5759083 | 4665321 | 5051906 | 6212393 | 5438517 | 5942869 | 3952361 | 4443968 | 4682165 | 4692798 | 4599544 | 4811228 | 4021725 | 4919224 | 3480092 | 5187383 | 5622236 | 5537003 | 5291412 | 5592382 | 5293955 | 5850884 | 5841126 | 5426294 | 6097023 | 3699316 | 5202829 | 4677562 | 4595843 | 4575304 | 4967319 | 4599620 | 6212476 | 5473364 | 5991615 | 5974347 | 5904196 | 5508592 | 5877897 | 5276618 | 5344144 | 5132695 | 6144158 | 4993912 | 4236099 | 5235178 | 5416318 | 5390124 | 5177489 | 5390125 | 5384574 | 4974687 | 5917442 | 4962453 | 5155490 | 5808907 | 5442558 | 5279672 | 5517419 | 5986583 | 5493694 | 5006672 | 5451014 | 5838562 | 3789351 | 5043902 | 4878170 | 5241380 | 5311950 | 4899945 | 4639610 | 5990469 | 5379320 | 5299130 | 3952813 | 5666028 | 0367420 | 5422814 | 4133404 | 3963096 | 5220263 | 4782550 | 5603383 | 5329206 | 4992696 | 6330499 | 5940927 | 5606506 | 6049171 | 5749058 | 5323322 | 5272639 | 5596255 | 5030957 | 4694639 | 5012886 | 5662180 | 5347286 | 4727329 | 5124549 | 4949268 | 5341540 | 5444965 | 4376909 | 5434407 | 4702718 | 5506506 | 4139801 | 5837994 | 5903124 | 3088157 | 5451822 | 5719771 | 5551545 | 5150712 | 4306329 | 3865200 | 5375059 | 4862037 | 5438337 | 5721691 | 5550677 | 4515235 | 4890233 | 5014066 | 2770074 | 6130421 | 4768135 | 4920095 | 6076226 | 5086253 | 5934386 | 5274329 | 5919078 | 5143073 | 5923027 | 5815071 | 4939444 | 5452639 | 5325302 | 5912534 | 5660454 | 5570285 | 5075693 | 4796191 | 4913458 | 4926127 | 4924450 | 5093839 | 4674048 | 5894621 | 5420593 | 2827594 | 5787545 | 5835613 | 5610488 | 2632040 | 6166698 | 5576605 | 4860018)![PN]	419	L15
L14	('5719500'| '6459955'| '6548982'| '6488105'| '5928309'| '6611755'| '5374914'| '6587573'| '6454036'| '2062719')[ABPN1,NRPN,PN,TBAN,WKU]	28	L14
L13	('5719500'| '6459955'| '6548982'| '6488105'| '5928309'| '6611755'| '6321515'| '5374914'| '6587573'| '6454036'| '2062719')[URPN]	92	L13
L12	L10 or l6	11	L12
L11	L10 and thread$	0	L11
L10	L7 and (lawn$ with mow$)	6	L10
L9	L8 and (lawn$ with mow$)	0	L9
L8	L7 and thread$	5	L8
L7	L2 or l4	113	L7
L6	l3 or L5	5	L6
L5	L4 and thread$	1	L5
L4	(compass$ same magnetic$) and (robot$ or (lawn$ with mower$)) and @pd<=20020328	71	L4
L3	L2 and thread$	4	L3
L2	(compass$ same magnetic$) and (robot$ or (lawn$ with mower$)) and @ad<=20020328	107	L2

DB=USPT; THES=ASSIGNEE; PLUR=YES; OP=OR

Hit List

First Hit | Clear | Generate Collection | Print | Fwd Refs | Bkwd Refs | Generate OACS

Search Results - Record(s) 1 through 6 of 6 returned.

☐ 1. Document ID: US 6459955 B1

Using default format because multiple data bases are involved.

L10: Entry 1 of 6 File: USPT Oct 1, 2002

US-PAT-NO: 6459955
DOCUMENT-IDENTIFIER: US 6459955 B1

TITLE: Home cleaning robot

DATE-ISSUED: October 1, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Bartsch; Eric Richard	Cincinnati	OH		
Fisher; Charles William	Loveland	OH		
France; Paul Amaat	West Chester	OH		
Kirkpatrick; James Frederick	Milford	OH		
Heaton; Gary Gordon	Cincinnati	OH		
Hortel; Thomas Charles	Cincinnati	OH		
Radomyselski; Arseni Velerevich	Hamilton	OH		
Stigall; James Randy	Hebron	KY		

US-CL-CURRENT: 700/245; 318/568.11, 318/568.12, 318/568.16, 318/587, 342/418, 342/457, 700/247, 700/256, 700/258, 700/259

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWMC | Draw De

☐ 2. Document ID: US 6454036 B1

L10: Entry 2 of 6 File: USPT Sep 24, 2002

US-PAT-NO: 6454036
DOCUMENT-IDENTIFIER: US 6454036 B1

TITLE: Autonomous vehicle navigation system and method

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWMC | Draw De

☐ 3. Document ID: US 6321515 B1

L10: Entry 3 of 6 File: USPT Nov 27, 2001

US-PAT-NO: 6321515
DOCUMENT-IDENTIFIER: US 6321515 B1

TITLE: Self-propelled lawn mower

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWMC | Draw De

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☐ 4. Document ID: US 5928309 A

L10: Entry 4 of 6 File: USPT Jul 27, 1999

US-PAT-NO: 5928309
DOCUMENT-IDENTIFIER: US 5928309 A

TITLE: Navigation/guidance system for a land-based vehicle

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWMC | Draw De

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☐ 5. Document ID: US 5719500 A

L10: Entry 5 of 6 File: USPT Feb 17, 1998

US-PAT-NO: 5719500
DOCUMENT-IDENTIFIER: US 5719500 A

TITLE: Process for detecting metallic items including a search path defined by a linear movement with a superimposed rotational movement along a curved closed path

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWMC | Draw De

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☐ 6. Document ID: US 5374914 A

L10: Entry 6 of 6 File: USPT Dec 20, 1994

US-PAT-NO: 5374914
DOCUMENT-IDENTIFIER: US 5374914 A

TITLE: Compact magnetic energy storage module

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWMC | Draw De

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Clear | Generate Collection | Print | Fwd Refs | Bkwd Refs | Generate OACS

Terms	Documents
L7 and (lawn$ with mow$)	6

L22: Entry 8 of 13 File: USPT Aug 29, 1995

DOCUMENT-IDENTIFIER: US 5444965 A
TITLE: Continuous and autonomous mowing system

Detailed Description Text (44):
The operation of the motor with electronic commutator can nevertheless cause very sudden magnetic field variations which are difficult to eliminate. This can disturb the operation of the limit detector (8) described above.

Detailed Description Text (47):
As indicated in FIG. 6, the control of the mowing device is effected with the assistance of an electronic circuit control comprising a micro-controller 102 with the mowing device management program in memory. Furthermore are illustrated an energy control device in 103, control of the motors in 104, photovoltaic cells in 105 and a battery in 106.

Detailed Description Text (107):
According to the invention, it is in fact possible to adopt a `mapping` system allowing the device to memorize the limits of the surface to be mowed, the zones already mowed and for each surface unit previously mowed the cutting force on the aforesaid unit. This allows the device subsequently to optimize the mowing route by repassing more often over the zones where the grass grows more rapidly.

Detailed Description Text (108):
For each surface unit the `mapping` assigns a memory point with a parameter `cutting force-limit obstacle` which enables it to prepare a map of the surface to be covered. The device can find its way around by obtaining a previous working knowledge of the obstacles on the plot of land. This technique is in itself known. Knowledge of the speed of each driving wheel in fact tells it the distance and the direction. Positioning or repositioning systems can also be devised by precise and periodic localization of generators (optical, ultrasonic or high frequency e.g.) disposed on the plot of land.

CLAIMS:

1. Autonomous lawn mower, with electric motors, comprising at least one driving wheel, a cutting system, an electronic operating and control system for operating and controlling said electric motors associated with said at least one driving wheel and said cutting system, a rechargeable battery and/or photovoltaic cells to supply energy for said electric motors and for said operating and control system, the total power utilized by said motors being less than 120 Watts and a microprocessor and means for detecting obstacles on, and/or limits of, a lawn surface being provided, said detecting means supplying relevant environmental information to said microprocessor; an algorithm stored in the memory of the microprocessor, the electronic operating and control system operating the lawn mower according to the responses to obstacles on, and/or limits of, the aforesaid surface supplied by the detector means and the algorithm, the algorithm maintaining the mower continuously either in operation, or in state of waiting for sunshine or recharging the rechargeable battery, the operation depending upon the state of charge of the rechargeable battery and/or the sunshine.

L22: Entry 9 of 13 File: USPT May 5, 1992

DOCUMENT-IDENTIFIER: US 5109566 A
TITLE: Self-running cleaning apparatus

Abstract Text (1):
A zone of a floor to be cleaned is subdivided into a plurality of blocks, the position of each block is memorized in a memory of a self-running cleaning apparatus, and the status of each block such that a wall or an obstacle is placed on the block or the block is passed by the cleaning apparatus thereon is also memorized in the memory. The cleaning apparatus moves across the blocks having neither wall nor obstacle thereon and which have not been passed by the cleaning apparatus on the basis of a predetermined priority order in running direction.

Brief Summary Text (11):
Furthermore, in the conventional self-running cleaning apparatus, the program and data for driving a cleaning path must be designed beforehand and stored in the memory of the apparatus. Also the conventional self-running cleaning apparatus cannot be used for cleaning desired spots which have not been stored in the memory by a user.

Brief Summary Text (22):
memory means for memorizing data of the information of the room,

Detailed Description Text (12):
A status sensor 34 is installed in the air path changing device 10, and thereby the status of the hose connector cover 13 is detected. A search coil 100 is disposed on a rear side part of the main body 1, and thereby a magnetic field generated by the inductive means 102 which is provided in a charger 101 installed apart from the main body 1 is detected. A coil 103 which is mounted in the main body 1 is for receiving electric power from the inductive means 102 through magnetic field, so that the received electric power is used for charging an electric power source e.g. nickel cadmium batteries 36, 36 of the cleaning apparatus.

Detailed Description Text (16):
An integrating circuit 51 to which an output signal from the direction sensor 26 is input is connected to the bus line 45 through an input port 50. A memory 52 for memorizing programs and/or data and a timer 53 are connected to the main processor 40. Predetermined times can be set in the Timer 53. Hence, the cleaning apparatus can be set to begin operating automatically at each predetermined time. Two batteries 36, 36 supply an electric powers to the above-mentioned control system. The batteries 36, 36 are automatically charged when a voltage which is higher than the output voltage of any one of the battery 36 is induced in the induction coil 103.

Detailed Description Text (19):
A block-map of a room R1, as shown in FIG. 6, comprises a plurality of squares which divide the room R1 lengthwise and crosswise. A block-map is represented by positional data of each square (hereinafter is referred to as a block), and the positional data is stored in advance in a memory 52 of the cleaning apparatus as shown in FIG. 5. The main body 1 moves on the block-map in a manner which is determined in a predetermined priority order. The priority order in the embodiment,

L22: Entry 10 of 13 File: USPT Apr 24, 1990

DOCUMENT-IDENTIFIER: US 4919224 A
TITLE: Automatic working vehicular system

Brief Summary Text (5):
By means of memory and reproduction devices to produce signals for controlling the route, U.S. Pat. No. 3,840,086 discloses the use of recording tapes for route record and control. Republic of China Patent Application No. 7410043 employs a pen mounted upon a paper reel device for making a route record which then is read by a photoelectric cell in order for a servo-control to reproduce the route. However, such methods are based on preset procedures to control the machine's course of travel. Therefore, circumstances such as an incorrect starting position or direction, wheel slippage during travel, or touching an obstacle, will cause a deviation from the preset route and potential injury. Thus, the routing method with an open-loop control is deemed impractical.

Brief Summary Text (6):
The machine according to U.S. Pat. No. 4,180,964 comprises a metal wire (band) laid in a desired path as a conductor for controlling the pendulous position of a magnet on the lawn mower. Using electrical contact points and relevant mechanisms to correct its direction, the lawn mower moves along the wire. This technique is well-known and used in automation plants. Current in the wire generates an alternating magnetic field which induces the coils on the automatic vehicle to control the vehicle's movement. However, if this control method is used to control an entire lawn mowing route, a wire must be laid along the entire lawn mowing route, and obviously, it also is not practical.

Detailed Description Text (2):
FIG. 1A shows the vehicle M of this invention. An electric power source 1 comprises an accumulator, a power supply and a charge circuit for storing and supplying the required power. A dynamic source 2 (a motor or an engine) is used to drive a travelling mechanism 4. Microcomputer 3 controls, via stored operational programs, the operation of the peripheral devices and commands specific procedures according to signals received from sensors (described in more detail later). For example, microcomputer 3 controls the travelling mechanism 4 to move forward, backward, and turn. An operation display panel 31 displays necessary operational information and, in addition, enables manual and automatic vehicle operations to be set and adjusted. One such operation which requires setting is the start time of the vehicle. According to this preset time (either a date or a periodic time), a timer 32 generates a signal to start a main switch of the vehicle. Timer 32 has an independent power supply, enabling it to measure time while the vehicle is parked and off. Emergency stop switches 33 (push-button and touch switches located throughout the vehicle) temporarily stop the vehicle in an emergency and can reset the vehicle following the emergency. Wire sensor 5 comprises several groups of coils mounted in front and rear ends of a machine body for sensing the alternating magnetic field of current wires paved on the ground in order to detect the location of the wires as the control data of the travelling route of the vehicle M. An ultrasonic distance measuring device 6 comprises several groups of supersonic transmission and reception units with calculating circuits for measuring the distance between the surrounding obstacles and the vehicle M, to detect the surrounding conditions during travelling. A margin sensor 7, having several

L22: Entry 11 of 13 File: USPT Jun 16, 1987

DOCUMENT-IDENTIFIER: US 4674048 A
TITLE: Multiple robot control system using grid coordinate system for tracking and completing travel over a mapped region containing obstructions

Brief Summary Text (3):
A mobile robot designed for unmanned movement is sometimes used for cleaning the floors of buildings. Such a robot may be equipped with a vacuum cleaner and/or sweepers to clean a range of a floor which it travels. Prior art system proposed for controlling the travel of the mobile robot includes one which lays guide cables along a predetermined path of travel of the robot so as to generate an electromagnetic wave. The robot will be guided by the cables while sensing the magnetic field by means of a sensor. Another prior art control system uses optical marks or tapes which are located along the path of travel so that the robot may follow the path sensing the marks or tapes.

Detailed Description Text (4):
The control circuit 6 comprises a central operational circuitry (CPU) 9, and a storage 10 made up of a read only memory (ROM) and a random access memory (RAM). The control circuit 6 further comprises an oscillator 11A for generating clock pulses, and an interrupt controller 11B. As will be described, the CPU 9 delivers a drive signal to a drive circuit 12 via an I/O port 8C in order to reversibly control the rotation of drive motors (servo motors or stepping motors) 13 and 14, which are respectively associated with right and left drive wheels of the robot. At the same time, the control 6 controls the rotation of a drive motor 15 for cleaning sweepers which are mounted on the robot. A control console 16 is accessible for selectively turning on and off a system power source, switching a running mode, setting a start position, adjusting a sensitivity of the direction sensor 2, etc. In order to teach the robot a boundary of a travel range assigned thereto, a command may be applied to the drive 12 by interruption with priority on a radio control basis. This is effected by a remotecontrol transmit unit 17 and a receive unit 18. The outputs of the control console 16 and remotecontrol receive unit 18 are routed also to the control circuit 6 via an I/O port 8B.

L22: Entry 12 of 13 File: USPT Sep 4, 1984

DOCUMENT-IDENTIFIER: US 4470119 A
TITLE: Mobile navigator

Abstract Text (1):
A mobile navigator comprises a distance detector for generating a running distance signal, an azimuth detector for generating a progression azimuth detecting signal, a CRT display for indicating the current position of an automotive vehicle, a microcomputer for calculating the current position of the vehicle from the distance detecting signal and the progression azimuth detecting signal and supplying the current position signal to the display, and a memory in which is stored a plurality of map data, earth's magnetic field declination information different for each area in association with the map data, and earth's magnetic field strength information.

Brief Summary Text (3):
In this navigator, however, a signal from the azimuth sensor is deviated a different declination for each area (for example, in a certain area of Aichiken, Japan the declination is 6.5.degree., and in some area of Hokkaido, Japan it is 9.degree.), and therefore the current position of vehicle on a road map will be deviated by the corresponding amount. In addition, the signal from the azimuth sensor is difficult to be distingushed from an external disturbance at a fixed-gain amplifier because of different earth's magnetic field strength (horizontal component) for each area (for example, in Aichiken, Japan the field strength is 310 m gauss, in Hokkaido, Japan it is 260 m gauss, and in a certain area of the middle west district of USA it is 150 m gauss).

Brief Summary Text (4):
Accordingly, it is an object of this invention to provide a mobile navigator in which a plurality of map data and earth's information different for each area in association with the plurality of map data are stored in storage means, a particular map data is read from this storage means and displayed on display means as a road map of a particular area, earth's magnetic field information associated with the particular-area road map read from the storage means, the current position of a running vehicle is calculated from the earth's magnetic field, a progression azimuth detected by an azimuth detecting means, a running distance detected by a distance detecting means, and the calculated current position is displayed on the display means to be superimposed upon the road map displayed on the display means, so that the current position of the vehicle can be correctly displayed on a road map by taking the earth's magnetic field information for each area into consideration.

Detailed Description Text (1):
An embodiment of this invention will hereinafter be described with reference to the drawings. FIG. 1 shows the whole arrangement of one embodiment of this invention. Referring to FIG. 1, there is shown a direction detector 1 which as a direction sensor for detecting the X- and Y-component of the earth's magnetic field in accordance with the direction in which a vehicle progresses, and an A/D converter for converting an analog signal from the sensor to a digital signal. Thus, this direction detector 1 genrates a digital signal of X- and Y-component according to the progression direction of vehicle. Shown at 2 is a distance sensor, which generates a distance pulse each time the vehicle progresses a unit distance (for

L22: Entry 13 of 13 File: DWPI Nov 21, 1985

DERWENT-ACC-NO: 1985-297545
DERWENT-WEEK: 198548

TITLE: Navigating system for self-propelled vehicle - measuring distance travelled and direction with display unit and memory storing point information including position

Basic Abstract Text (1):
The system has a control specifying the geographic description of a starting point and a destination point for reading position information from the memory and for receiving signals from the distance and direction sensors to calculate the present position of the vehicle and to calculate the coordinates of the starting point, the destination point and the present position.

Basic Abstract Text (2):
The control controls the display so to show marks showing the points on a reduced scale. The memory stores the declination of the earth's magnetic field at numerous points and takes these figures into account to correct the measured direction of travel.

Patent Family Serial Number (3):
4677562

Equivalent Abstract Text (1):
The automotive navigation system has a memory that stores geographical names and the geographical positions of points as well as the declination of the earth magnetism of the points. When the geographical names of a depature point and a destination point are entered through an input unit, a control circuit reads out from the memory the respective positions of the points entered. The control circuit controls a display unit to display on a screen marks respectively indicating the departure point, the destination point, and the current position of a vehicle on an adequately reduced scale determined by the positions of these points.

Equivalent Abstract Text (2):
A point nearest to the current position of the vehicle while the vehicle is being driven is determined and retrieved by the control circuit from the memory storage means. On the basis of the declination information of this retrieved point, the detected vehicle heading direction is corrected to make an accurate computation of the current position of the vehicle.

Equivalent Abstract Text (3):
ADVANTAGE - Performs full navigation function with small memory and arithmetic unit. (19pp)

Standard Title Terms (1):
NAVIGATION SYSTEM SELF PROPEL VEHICLE MEASURE DISTANCE TRAVEL DIRECTION DISPLAY UNIT MEMORY STORAGE POINT INFORMATION POSITION

L10: Entry 1 of 6 File: USPT Oct 1, 2002

US-PAT-NO: 6459955
DOCUMENT-IDENTIFIER: US 6459955 B1

TITLE: Home cleaning robot

DATE-ISSUED: October 1, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Bartsch; Eric Richard	Cincinnati	OH		
Fisher; Charles William	Loveland	OH		
France; Paul Amaat	West Chester	OH		
Kirkpatrick; James Frederick	Milford	OH		
Heaton; Gary Gordon	Cincinnati	OH		
Hortel; Thomas Charles	Cincinnati	OH		
Radomyselski; Arseni Velerevich	Hamilton	OH		
Stigall; James Randy	Hebron	KY		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
The Procter & Gamble Company	Cincinnati	OH			02

APPL-NO: 09/715307 [PALM]
DATE FILED: November 17, 2000

PARENT-CASE:
This application claims benefit of provisional application No. 60/166,237 filed Nov. 18, 1999.

INT-CL-ISSUED: [07] G06 F 19/00

US-CL-ISSUED: 700/245; 700/247, 700/256, 700/258, 700/259, 318/568.11, 318/568.12, 318/568.16, 318/587, 342/457, 342/418
US-CL-CURRENT: 700/245; 318/568.11, 318/568.12, 318/568.16, 318/587, 342/418, 342/457, 700/247, 700/256, 700/258, 700/259

FIELD-OF-CLASSIFICATION-SEARCH: 700/245, 700/247, 700/256, 700/259, 700/79, 700/83, 700/258, 318/587, 318/568.11, 318/568.16, 318/568.12, 701/22, 701/23, 701/25, 701/24, 701/206, 701/207, 701/225, 701/300, 701/26, 701/28, 701/217, 701/223, 342/457, 342/418, 180/167, 180/169, 340/990, 340/991, 340/995, 215/319
See application file for complete search history.

PRIOR-ART-DISCLOSED:

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Radio Shack Product Catologue No. Dustbot 600-2556. 16 pictures of the Radio Shack Dustbot are enclosed.

ART-UNIT: 3661

PRIMARY-EXAMINER: Cuchlinski, Jr.; William A.

ASSISTANT-EXAMINER: Marc; McDieunel

ATTY-AGENT-FIRM: Huston; Larry L. Lewis; Leonard L.

ABSTRACT:

An autonomously movable cleaning robot comprising a platform and motive force to autonomously move the robot on a substantially horizontal surface having boundaries. The robot further has a computer processing unit for storing, receiving and transmitting data, and a cleaning implement operatively associated with the robot. The robot receives input data from an external source. The external source may be physical manipulation of the robot, remote control, or by triangulation from at least three external transmitters.

9 Claims, 28 Drawing figures

Previous Doc Next Doc Go to Doc#